



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,351	03/24/2004	Akihito Kusano	033498-024	5379
21839	7590	12/15/2005	EXAMINER	
BUCHANAN INGERSOLL PC (INCLUDING BURNS, DOANE, SWECKER & MATHIS) POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			BURCH, MELODY M	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/807,351	Applicant(s) KUSANO ET AL.	
	Examiner Melody M. Burch	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the vehicle first recited in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including

Art Unit: 3683

annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 10, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6199964 to Ota et al.

Re: claims 1 and 10. Ota et al. show in figure 3 a vehicle hydraulic brake device comprising a hydraulic pressure source HP for generating and outputting a predetermined hydraulic pressure, a pressure adjusting valve RG for adjusting the output hydraulic pressure of the hydraulic pressure source to a value corresponding to a brake operating amount and wheel cylinders Wrl-Wfr actuated by the output hydraulic pressure of the pressure adjusting valve to impart braking force to wheels of the vehicle, further comprising a hydraulic pressure supply passage extending from RG down to the horizontal line above Wrl connected to a hydraulic passage extending from the point above MR1 down to below PC8 and including a portion of the horizontal line above leading from the pressure adjusting valve to the wheel cylinders, a first proportional

Art Unit: 3683

solenoid valve PC7 provided in the hydraulic pressure supply passage for reducing the output hydraulic pressure of the hydraulic pressure source (within Wrr) and supplying it to the hydraulic passage (the portion of which including the horizontal line above Wrl) leading from the pressure adjusting valve to the wheel cylinders, a second proportional solenoid valve SA3 disposed between the hydraulic pressure supply passage (the lower portions of which) and the pressure adjusting valve for reducing the hydraulic pressure supplied from the hydraulic pressure supply passage (to zero when closed), a check valve CV5 provided parallel to the second proportional valve and allowing fluid flow from the pressure adjusting valve toward the hydraulic pressure supply passage and a control means ECU for controlling operations of the first and second proportional solenoid valves, wherein control of the hydraulic pressure supplied to the wheel cylinders during automatic brake control is performed by the first proportional solenoid valve and the second proportional solenoid valve as disclosed in col. 10 lines 3-4.

Re: claims 2, 3, and 11. See the rejection of claim 1 and a pressure chamber within the element labeled MC connected to the pressure regulating chamber as shown (RG is connected to MC), a master cylinder MC inherently including a master piston actuated by the output pressure of the pressure adjusting valve introduced into the pressure chamber since, as broadly claimed, the hydraulic pressure of the pressure adjusting valve is circulated throughout the brake device, a solenoid valve PC3 for supplying the output hydraulic pressure of the pressure adjusting valve to a hydraulic system leading from the master cylinder to the wheel cylinder Wrr, a hydraulic pressure

Art Unit: 3683

supply passage as set forth above connected to a hydraulic passage as set forth above connecting the pressure adjusting valve to the solenoid valve.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. in view of US Patent 6422662 to Haas.

Ota et al. lack the limitation of the means for detecting that the output hydraulic pressure of the pressure adjusting valve has become equal to the hydraulic pressure of the hydraulic pressure supply passage, and wherein when it is detected by the means that the output hydraulic pressure of the pressure adjusting valve has become equal to the hydraulic pressure of the hydraulic pressure supply passage, automatic brake control is stopped.

Haas teaches in the abstract, in col. 4 lines 24-44, and in figure 1 the use of a brake device in which a means 107,108,110 for detecting that the output hydraulic pressure of above valve 113 has become equal to the hydraulic pressure of the hydraulic pressure supply passage or the area below valve 113, and wherein when it is detected by the means that the output hydraulic pressure of the pressure adjusting valve has become equal to the hydraulic pressure of the hydraulic pressure supply

passage or when the pressure at the wheel cylinders is higher than the hydraulic , automatic brake control is stopped.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Ota et al. to have included means for detecting and comparing the hydraulic pressures, as taught by Haas, in order to provide a means of determining when to trigger pump activation.

Response to Arguments

7. Applicant's arguments filed 9/21/05 have been fully considered but they are not persuasive. Examiner notes that Ota et al. show in figure 3 a junction shown at the point below element PC7. Ota et al. show the first proportional solenoid valve PC7 provided in the hydraulic pressure supply passage for reducing the output hydraulic pressure of the hydraulic pressure source HP (that has been re-circulated and is released from element Wrr) before being supplied to the hydraulic passage or the passage starting below element PC7, as broadly recited. Examiner also notes that Ota et al. include the limitation of the various degrees of openness since the valves move from fully open to fully closed and, therefore, inherently have intermediate degrees of openness. Applicant argues that valves PC7 and SA3 are disposed in the same passage. Although the argument is more specific than the claim language, Examiner notes that PC7 is arranged in a passage starting from Wrr leading to a junction fluidly between Wrr and PC7, the passage extending through PC7 and further passing PC7 to a junction connecting PC7 to the line connected to HP. On the other hand, SA3 is arranged in a passage starting from RG and extending to a junction in the area of

Art Unit: 3683

element MR1. As broadly recited, the valves are disposed on separate passages.

Accordingly, the rejections have been maintained.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mmb
December 12, 2005

Melody M. Burch
Melody M. Burch
Primary Examiner
Art Unit 3683
12/12/05